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THE SURGEON AND THE PATHOLOGIST.

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AMONGST the many developments of surgery which have taken place during the last few years none, perhaps, is more striking than the demand which the surgeon makes for assistance from the pathologist. It is even more striking how keen an interest the public are beginning to take in this aspect of the question, and how different their attitude now is to what it was some few years back.

When I began work at St. Bartholomew's Hospital one might often hear pathology decried, and many good stories were told at the expense of the pathologist. I will relate one which I daresay has been fathered on to a great many people, and which, at any rate, has this merit that it will enable you to understand the light in which the generality of students of that day regarded pathology and the pathologist.

A physician was sent for to see a patient in the country, and on his return journey seated himself snugly in the corner of a first-class railway carriage to enjoy an evening paper. Two strangers, evidently from the neighbourhood, entered the carriage, and one of them, who was a local doctor, remarked to his neighbour, "Have you heard how seriously ill Mr. —— is." "Yes," replied his friend, "I hear Dr. So-and-So is coming down to-day from London to see him." "Quite impossible," said the doctor, "he's only a pathologist." "What's a pathologist?" said his friend. "Oh," replied the doctor, "one of those fellows who comes and cuts you up when you're dead." "What's the good of that," said his friend; "it would be much more to the point if he could open you when you're alive, and then perhaps he might find out what was wrong, and possibly do you some good.' "Quite impossible," said the local doctor; "you wouldn't suggest such a thing if you understood anything about medicine." The physician who had been listening to this friendly criticism on himself with his face buried in his newspaper retreated to another carriage, and returned home a sadder and a wiser man. He had never before realised that pathology and medicine were incompatible.

It is difficult to picture to ourselves what surgery would be without pathology, and perhaps equally difficult to grasp the enormous help which we may derive to-day from active co-operation with the pathologist. Still more difficult is it to realise how much greater will be the assistance we shall obtain from him in the near future. I can make no pretence of giving you a *resumé* of recent pathological progress. You could obtain it far better from others who are devoting their lives to the subject, but what I will try to do is to illustrate by certain examples how surgery has been and is being changed by recent pathological work, and how necessary it is to call in the co-operation of the pathologist.

Let me first carry you back for the moment to what I may term the surgery of empiricism. A few weeks back I was looking over the works of Percival Pott, whose portrait, by Sir Joshua Reynolds, adorns our Hall, and I came upon the following statements made by him just 130 years ago on the subject of diseases of the testicle. He writes as follows:

"Many people I have known who have lived several years or their whole lives perfectly free from disease after the removal of schirrhous testicles, and several I have known who, having deferred the operation until they were urged by pain, increase of size, and inequality of the tumour, have, from the sore becoming cancerous, not been able to obtain a cure." But Pott further emphasises his uncertainty in these cases by relating that one of those whom he had cured was a sailor who had been admitted into St. Bartholomew's Hospital, and whose testicle he had removed "at the earnest solicitation of one of the Governors," though at the same time he implies that it was somewhat against his own judgment.

One thing, however, is clear, and that is, that Pott was very anxious to obtain a better insight into the construction of these growths, for he says, "Were we capable of knowing which those schirrhi were that would remain quiet and inoffensive throughout life, or for a great length of time, and which would not, we should then be enabled to advise or dissuade the operation, upon much better (that is, surer) grounds than at present we are able to do. We have no such degree of knowledge."

How startled Pott would be could he reappear in his powdered wig and knee-breeches and see the pathologist in our new theatres with a freezing microtome reporting on the nature of a growth, whilst the surgeon waits, knife in hand, ready to pin his faith on the verdict of the microscope.

Still further would he realise that the whole conception of surgical disease was metamorphosed by the revelations of the ravages of the bacillus. If the pathologist has taught us to reverence the bacillus and his products, the culture tube still reveals to us how difficult it is to be quit of him.

One great problem which awaits solution is how to render our own skin and those of our patients absolutely sterile. The attempts that have been made in this direction are legion, but it is questionable if any one of them can be styled perfect. It is to the pathologist that we look for progress in this direction, and if he is to help us he must know our needs and we must understand his methods. Only within the last few months Professor Wright, now at

St. Mary's Hospital, has made a fresh suggestion which, it seems possible, may carry us a stage further on our road. He has shown that a 15 per cent. solution of gelatin dissolved in hot water, to which 2 per cent. of formalin is added, can be painted on the skin much in the same way that collodion is employed. The effect of this flexible protective on the organisms that inhabit the skin, and so tenaciously stick to its pores is very striking. In a few hours (I am not quite sure of the exact number) the organisms become inert and no longer able to propagate their species, and if you put them under the microscope they remind one of the male stag beetle, which is seen in such abundance at this time of the year in certain parts of the country, who is so exhausted by the process of reproduction that after a few short days of life he lies on his back and perishes.

Be this the solution of the absolute prevention of infection or not, rely upon it we shall in time find a method that is as easy and certain of application as the common sterilizer which is now in such universal request for our instruments.

But the surgeon realises quite as clearly as does the pathologist that he cannot always obtain sterile tissues on which to perform his operations. Once infected, how is an individual to be freed from infection? Both surgeon and pathologist must co-operate if we are to attain this end.

Let us try and picture to ourselves exactly what takes place when a patient's finger is infected say by a small poisoned wound. We will assume that our patient has no constitutional disturbance. An examination of his blood taken from a part of the body far removed from the seat of infection will, in all probability, display nothing abnormal. There will be no increased leucocytosis.

Suppose, however, his finger is pricked at the seat of the poisoned wound and a few drops of pus are evacuated. In twenty-four hours all trouble will be at an end. If we make an examination of the pus it is full possibly of staphylococci; and there is a local leucocytosis in the immediate vicinity. The surgeon will tell you that he has let out the pus and removed the cause of the trouble. He orders a fomentation, and possibly an arm bath as well, and he asserts that he has cured his patient. In one sense he is correct. But what has the pathologist to say in the matter. He states that the cure is due to the hanging down of the arm in the bath, and the consequent douching of the wound by the protective material, which is brought there by the flow of blood to the part.

If we illustrate the process by a homely simile, a raid has been made upon the organism by a hostile staphylococcus, and the invasion has been repelled by the ample reserves which have been poured into the breach that has been made. But the pathologist can throw further light on the process. Observe he is quite ready to admit that the surgeon has done the right thing at the right moment, that he has destroyed some of the enemy's forces, and further that he has enlarged the breach by which the enemy can be repelled. But, says he, if I examine the pus from the abscess it displays no opsonic power, whilst the blood and serum that are poured out from the immediate neighbourhood display that power in a remarkable degree.

What does he mean by that remark? Some of you are, I daresay, cognisant of his meaning, but I doubt if you fully appreciate the significance of his remarks. We have all heard of phagocytosis; but it is only quite recently that we have been enabled to measure its varying powers, and to learn how it may be varied by the action of the pathologist. To return to our simile of an invasion. There are two principal methods by which the invasion by staphylococci can be repelled, one is by calling in the aid of our allies, *i. e.* by injecting a serum which is derived from another animal, and the other which I think I may claim is under ordinary circumstances the better method, viz. by relying on ourselves, marshalling our own forces into action, and repelling the enemy before he can make any serious inroad. If we rely on the help of our allies, it must always be difficult to gauge the exact amount of assistance we may require.

The employment of these outsiders may prove too exhausting a process. In such a case we can only determine our needs by the somewhat rough and ready plan of ascertaining the weight of the human body into which the serum has to be injected. We then make the assumption that the whole of the human body in question is invaded equally, and secondly that the serum we are introducing will act on the diseased individual exactly as it has done on some other animal on which it has previously been tried. And we employ what we believe to be a suitable dose. Observe there is a good deal of uncertainty in the process.

In other words we are trusting solely to a quantitative estimate, and ignoring entirely the quality of the forces that reside in the human body that has been attacked. Quite recently, however, Professor Wright has shown us that if we place under the field of the microscope a drop of the blood of the attacked individual, and compare it with that of a certain number of healthy individuals, so as to obtain a standard, we shall find that the eosinophile leucocytes, which have transformed themselves into phagocytes or scavengers for the time being in the attacked individual, vary considerably in the number of bacteria, which they can swallow, digest, and make away with. They are unable it may be to swallow as many bacteria as the healthy individual can, or possibly they can swallow more. By this comparison that has been instituted a standard has been obtained. To this power of digestion the term opsonic power has been given. It is derived from the Greek word ὄψον a dainty. There is no accounting for tastes. The phagocyte likes his savoury in the form of a bacillus, but it must be prepared by a skilful chef if he is to take it in any considerable quantity. The blood serum is the chef, and the material which he uses to

convert the bacillus into a savoury morsel is called an opsonin. We are all of us possessed of a small standing army of opsonins, capable say of enabling each leucocyte to take up and digest two or three bacilli. This represents the opsonic power of ordinary health. When an invasion is threatened we promptly increase our standing army automatically as occasion may require. In pathological language we raise our opsonic index, and so we can devour and eradicate the invader. But the most interesting part of Wright's researches consists in the fact that he has shown us how it is possible to increase enormously our standing army of opsonins at very short notice, and so repel a combined attack of large masses of the enemy instead of being overpowered by their furious onslaughts.

We are all aware that practice makes perfect, and that long and careful preparation are necessary before we attain to perfection. It is by practice and careful preparation only that we can raise the opsonic power of our blood serum to five or six times or more beyond its normal amount. The process is an exceedingly simple one. Pathogenic bacteria, as you know, are destructive to the organism, not in consequence of their multiplication, but by reason of the fact that as they multiply, they form large quantities of toxins or poisons by means of which deleterious effects are produced largely on the muscles, and notably on the heart muscle, in consequence of which the circulation of the blood is brought to a standstill.

We are all familiar with the phenomena of toleration in the human body. Opium, alcohol, and tobacco, if they are taken in gradually increasing amounts, are readily tolerated. Larger and larger quantities are required to induce a toxic effect. And the same phenomena are observed in connection with the bacterial toxins. An increased amount of opsonins are produced as the need for them increases. The blood serum in which they are carried can be rapidly raised in opsonic power by introducing gradually increasing doses of bacterial toxins. All that is necessary to bring about this object is to kill the bacteria, and then inject an emulsion of them into the infected body. By this means we can introduce a definite dose of toxin, and, at the same time, we are sure that no more will be produced by the increase of the bacilli themselves, as they have been killed beforehand.

The effect of this method of treatment is very striking in certain cases. Directly after inoculation the curve of opsonic power shows at first a dip, the negative phase during which the resistance of the patient is lowered to the poison. This phase may last for some hours, but it is soon succeeded by a marked rise, which will last perhaps some days, when a slight fall again takes place. But this fall does not reach the level from which the patient started. A definite step has been gained. Another dose larger in amount is given ; a slight drop ensues for a few hours, then another rise occurs. A second step is gained. By increases of dosage further steps are gained, until eventually the limit of opsonic power is reached.

You will observe that at each of these steps two temporary falls in opsonic power take place, the first one a few hours after the injection, and the second three or four days later as the effect of the antitoxin is passing off. It is very important to realise exactly when these decreases in opsonic power are taking place, for it is just at these periods that rigors are liable to occur.

The pathological details to which I have just been referring are highly complicated, and, if full advantage is to be taken of this method of treatment, it is absolutely essential that the pathologist should be present and consult with those who are in attendance on the patient So far I have dealt mainly with abstract questions of pathological principles ; you will, I think, more readily grasp the need of the pathologist when these principles are being put into practice if I relate to you the case of a lady whom I have recently attended, in which I had the advantage of consultations both with Sir William Broadbent and Professor Wright, as well as the help of her general practitioner.

The case was that of a lady who was seriously ill with pus in the urine. When I first saw her it was with a view to determining whether the pus was flowing from both kidneys or only from one. For our present purpose it is unnecessary to consider the earlier history of the case further than to state that she had suffered from a somewhat similar attack some year or more previously. A separator was introduced into the bladder, and speedily revealed the fact that practically no urine was being secreted by the left kidney, and that the pus was coming from the right side. The urine was offensive, and contained abundant colon bacilli. Colon bacilli in the bladder may be comparatively innocuous, but when they ascend to the kidney they are difficult if not impossible to dislodge, except by removal of the diseased organ, which in this case was out of the question.

The patient's condition did not improve under ordinary medical measures, and about a week later I drained the kidney. For a time the patient improved. The improvement was not maintained ; the bacilli in the urine did not disappear. The patient got worse ; her aspect did not improve, and her appearance pointed to the fact that some hæmolytic action was taking place. The blood pigment was being broken up presumably by the toxic action of the coli-toxins. A rigor occurred which weakened the patient considerably. At this stage Professor Wright came on the scene, a drop of blood was drawn, and its opsonic index was 0·8. An injection of fifty million dead colon bacilli was introduced, and the following day the opsonic index or protective power of the patient had fallen to 0·6. In the afternoon another rigor occurred.

Now mark the general effect of the rigor. The patient was not so severely affected by it as by her previous rigors ; she recovered from it more rapidly. The following day the opsonic index had risen to 1·5. The effect on her general condition was striking. She herself realised the benefit of the injection, and was anxious for another. But it is no light matter to introduce fifty million bacilli into a person even if they are dead, and we conferred with Prof. Wright before doing so. The blood was examined, the protective power had fallen to ·95, and another injection was introduced. The protective power had risen next day to 1 ; another slight rigor took place. A few days later the protective power had risen to 2·5. It is unnecessary for me to trace in detail the further stages of this case. One point, however, I am anxious to emphasise, viz. the fact that the rigors almost invariably occurred when the opsonic index was low ; and after a little time we found we could predict the opsonic index from the patient's general appearance with a fair degree of accuracy.

But whilst we were conscious of the value of Professor Wright's injection, he was equally conscious of the fact that

there might be some masked battery in the shape of a hidden pus focus that was letting loose its deadly missiles and slowly but surely overpowering the opsonins. And he was urging the physician to explore with his stethoscope and the surgeon to try his exploring syringe. Again and again did we respond to his challenge, we each plied our weapons; but the victory was not to be ours this time. At length, after a long and goodly fight, the stethoscope, the exploring syringe, and the opsonins were all worsted, and *Bacillus coli* was triumphant. But of one thing I am quite certain, if we had not been united, and worked together, and realised we were all working for a common end, we could not have stood our ground so long. The victory that has been wrested from us to-day will be ours to-morrow. And this method of treatment is applicable to various diseases, and can be employed for the eradication of various forms of bacilli and cocci. I am at present using this method for a case of tubercular disease of both kidneys, though it is as yet too early to speak of results.

But there is another point to be considered. So far we have merely discussed the raising of the opsonic index in order to tide us over a difficulty, but there is another side to the question. There are probably many instances of slight departure from what we term health in which a slight rise in the opsonic index is all that is needed. Already we seem to be within a measurable distance of explaining the tendency to boils which some people exhibit at certain periods, and which almost everyone displays for a while during the onset of puberty. I know of one case at least in which a tendency to boils has been overcome by raising the opsonic value of the blood serum, and so increasing the protective power of the individual. This method opens a wide field for preventive medicine.

Let me now turn from this side of pathology to another, in which we are on surer ground. I allude to the use of saline injections. Like the preceding method to which I have just referred, it should be used mainly to tide us over a difficulty.

It is only the other day that we were practising transfusion with human blood, and that we believed that a loss of blood must be replaced by blood. The pathologist stepped in and informed us that the blood of one animal cannot be made use of by another. It is not even necessary to inject blood at all; if we do employ it the blood-corpuscles are broken up and destroyed, devoured apparently by the host into whom they have been needlessly conveyed. So great is the economy which is practised by the human body that cannibalism is resorted to, perhaps performed as a regular duty by the blood corpuscles; at any rate, no hesitation is exhibited in the case of an invasion by the blood corpuscles of one's neighbours. Of the economy of this method of disposing of one's neighbours there can be no doubt. If any of you are in doubt on this point, let me refer you to the thrilling, though horrible, description which is given of cannibalism by Sydney Hinde, an old Bart.'s man, in his work entitled "The fall of the Congo Arabs," p. 69, where he makes the following statement:

"On the night following a battle, or the storming of a town, these human wolves disposed of all the dead, leaving nothing even for the jackals, and thus saved us, no doubt, from many an epidemic."

But to revert to my more immediate point, the value of saline injections. To-day not only are we employing them in cases of loss of blood, but we are calling in their aid to help us when the circulation has been poisoned and the toxins are paralysing the muscles.

A few weeks back a boy was admitted under my care suffering from a severe attack of streptococcal appendicitis. He was almost pulseless. His appendix as it turned out had become gangrenous and had ruptured, and he was suffering from a severe attack of peritonitis. The appendix was removed, and the boy returned to bed almost moribund. His connective tissues were flooded with saline solution by means of aspirator syringe points that were inserted under his pectorals and in other parts of his body. Upwards of fourteen pints were introduced in twenty-four hours. He began at once to improve, and by the end of forty-eight hours from the operation he was in a fair way to recovery, and actually left the hospital before four weeks had elapsed practically well.

Large quantities of serum-like fluid welled up through his peritoneal wound. The fluid which we injected speedily found its way from the connective tissues to the great lymph sacs, and carried with it no doubt blood serum and reserve opsonins from distant parts of the body by means of which the toxins of his disease were rapidly neutralised or washed away.

Not the least interesting side of this picture was the insight which it gave us into the rapidity with which, under suitable conditions, the effects of such a deadly poison could be neutralised. A periodical examination of the blood showed us that the leucocytosis, which at the height of the disease had attained to four or five times the normal amount, had in less than five days sunk practically to normal, thus indicating to us how rapidly the human body can marshal its warriors for the fray, and how equally rapidly they retire to their peaceful homely duties when the need for their services has gone by.

I have, I am sure, said enough to convince you of the need for the demands that we are now making on the time and skill of the pathologist, and to show you that our new pathological department which we hope soon to see growing up in our midst will have ample material both for work and for reflection. I hope I have succeeded in convincing you on another point, viz. that if we are to get the best work and the best thought from the pathologist we must meet him face to face, and not be content with a mere stereotyped report. We must take him into our confidence, and he must take us into his. We must confer together on what is to be done if our patients are to get the best of his thoughts and ours.

When I reflect upon cases such as these which I have just related, I often recall the following lines of Pope, and with these lines I will close my remarks.

"All nature is but art unknown to thee,
All chance direction which thou can'st not see;
All discord harmony not understood,
All partial evil universal good."

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the small patient will fail to improve, and one's reputation as a medical man may be greatly endangered. This fact has been brought home to me quite recently, when I was asked to see a child who was suffering from scurvy by a lady who had just come to reside in my district, and upon asking her for the history I found that three doctors had seen the child, and from their treatment it was quite evident that they had entirely failed to recognise what was wrong with the little sufferer; and then the knowledge that I had acquired by being house surgeon in a children's hospital was of great service to me.

Scurvy is essentially a disease produced by injudicious feeding, and insanitary surroundings only play a minor part in producing it. So naturally enough scurvy is more common amongst the poor, where infants in arms are so frequently fed upon "a little of whatever the parents are having." Again, the incidence of scurvy is greatest in those towns where there is a great demand for female labour, and where the mother a few weeks after her confinement returns to work, and is away from her home the whole day, leaving her child to the care of some neighbour.

The age at which children are usually affected is between four and twelve months. There is usually present in addition to the signs of scurvy some evidence of rickets, as slight enlargement of the epiphyses of the long bones, beading of the ribs, late dentition, sweating on the head, etc. The onset of the disease is sudden, in that the characteristic symptoms becomes manifest somewhat rapidly, whereas pallor, anæmia, and debility slowly develop prior to the sudden onset.

When the illness is fully developed the child is always profoundly anæmic, is continually crying as though in pain, resents being touched, and if the attack be very acute will cry out even on the approach of anyone from fear of being handled. The facial expression is wizened and old looking, the skin is apt to be wrinkled, and there is some emaciation. The lower extremities are kept quite still as though paralysed, the lower half of the thighs and either the lower or upper half of the legs present a uniform swelling, which is due to a subperiosteal hæmorrhage, the upper extremities are usually free from swellings, the joints always. There is discoloration of the skin over the upper part of the orbit, with proptosis, puffiness of the upper lid, and sometimes strabismus may be observed. The proptosis is caused by a blood extravasation into the easily distended space between the roof of the orbit and its periosteum. The eyeball is thus pushed downwards and forwards, and the upper lid becomes tense and bulged. Besides subperiosteal changes in severe cases deep-seated hæmorrhages into the muscles themselves may take place, causing a puffy swelling and brawny induration, thus exciting the suspicion of an abscess. In a case like this at the Victoria Hospital for Children at Chelsea I was tempted to use an exploring syringe with a result that only a small quantity of blood was drawn off; but there is no heat or redness of the surface, and no sense of fluctuation. The gums are of a bluish tint, and, if the teeth have appeared, spongy. Occasionally the body is covered with petechiæ, the motions and urine may contain blood, and should there be any nasal discharge this also may be blood stained. The temperature during the acute stage is generally raised to 101° or 102°, but when this has subsided it becomes subnormal, and in one case at the Victoria Hospital it was so low that it could not be registered by the ordinary clinical thermometer.

Differential diagnosis.—When the gums are not spongy and the periosteal affection not pronounced the case may be taken for—

(1) Rickets.
(2) Rheumatism.
(3) Simple anæmia.
(4) Debility.

If the case be severe the tenderness and swelling of the limbs may lead to a mistaken diagnosis of—

(5) Rheumatism.

But as already mentioned the joints are always free from swellings.

When the legs are motionless a diagnosis of—

(6) Infantile paralysis may be made.

And lastly, the tenderness and dread of movement of the lower limbs may suggest—

(7) A tuberculous hip or knee-joint.

Treatment.—This is wholly dietetic. The first thing to do is to discontinue at once all proprietary foods. Give new milk. Peptonisation and pancreatisation greatly impairs its antiscorbutic property, and also boiling, but to a less degree. The milk should at first be mixed with an equal quantity of barley water, for the digestive powers of the infant are deranged, and it is, as a rule, unable to assimilate properly undiluted milk. Within a fortnight milk without the addition of barley water may be tried if the child has not been sick and the motions have been free from undigested milk. At the onset of treatment from ʒj to ʒij of raw meat juice should be given three times daily, and also the juice of an orange sweetened with a little sugar. The bowels if constipated should be regulated with small doses of calomel and scammony.

The *prognosis* is excellent, for under such treatment the child will be restored to good health within a few weeks.

The following case first suggested to me the idea of writing this paper:

Towards the end of March of this year I was requested to visit the child of some well-to-do people who had just come to reside in the neighbourhood. Upon making inquiries I found the infant was nine and a half months old, and a boy. He had been breast fed for the first three months, but as the mother's breasts were very troublesome, the act of suckling causing much pain, the doctor who was in attendance advised the mother to discontinue nursing her infant, and suggested some form of *proprietary food*, with a result that the child

soon began to show evidence of anæmia. When the boy had been taking the patent food for three months he began to cry incessantly, became profoundly anæmic, and gradually lost the power of movement of his lower limbs, and his urine contained blood; for this latter symptom urotropin was freely given. As the child, instead of improving, steadily became worse another doctor was seen in consultation, who apparently quite agreed with the feeding and treatment, the parents being told that the child was suffering from anæmia and debility. The mother, however, not being satisfied consulted the family doctor, who seems to have had no further suggestions to make. When the infant was eight months old he developed chicken-pox.

I found the child extremely anæmic, with an earthy complexion, the face was wrinkled and old looking, the skin was dry. The anterior fontanelle was wide open. There was a brownish discoloration over the upper part of both orbits, the right upper eyelid was slightly puffy, but there was no proptosis of this eye. The left eye was protruding to such an extent as to give the child a most hideous appearance, the upper lid was very puffy, and there was an internal strabismus. Two teeth had been cut, the gums were of a bluish tint and tender, but not spongy. The body was covered with petechiæ. There was slight beading of the ribs. There was some enlargement of the epiphyses of the radii, ulnæ, tibiæ, and fibulæ. The lower half of both thighs and the upper third of both legs presented a uniform enlargement. The child's legs hung limply down, and he made not the slightest attempt to move them; he yelled vigorously during the whole process of examination. Equal parts of barley water and unboiled milk were ordered, and in addition the juice of one orange sweetened with sugar and ʒij of raw meat juice were given three times daily. On my next visit a few days later I was informed that the child was frequently vomiting, and that he was very constipated, so I suggested that one third of milk and two thirds of barley water should be given, and also some calomel and scammony powders. A week later the vomiting had completely ceased, and the child was infinitely better; the proptosis and orbital discoloration were both much diminished, the urine was free from blood, the petechiæ were no longer visible, and he had begun to move his legs; he slept well at nights, and cried but little. Equal parts of milk and barley water were again tried. A fortnight later the swellings of the thighs and legs had completely subsided, there was a very slight fulness of the left upper eyelid, the proptosis no longer existed, but the strabismus was still just discernible. The child seemed happy and well, and kicked vigorously whilst being examined. I then ordered undiluted milk to be given, and discontinued to see the patient.

The Royal Army Medical Corps.

III.

MOST of us have seen the "Advantages of the Army" displayed in brilliant colours at the post office or police station for the benefit of the would-be recruit. I hope these letters will not be regarded in this light; so, lest I should be supposed to be giving only one side of the question, I repeat that the main drawbacks to the life of a medical officer in the army are those attendant on prolonged foreign service, which affect especially the married man, and frequent changes of station, which may be very uncomfortable even for the bachelor. These points were dealt with in more detail in my first letter.* My aim has been to try and make clear some points to men interested in the matter, who have not the same chances of finding out for themselves as have their contemporaries in a large garrison town, such as Dublin.

To return to opportunities for scientific work in the army. I have already* touched on hygiene and pathology. I might have added that it is hardly possible in civil life, without considerable loss, for a man, after spending some years at such subjects, to revert to general work should he prefer it, as can be done in the army. On the other hand, should the army doctor wish to take up research work, it seems to me that he starts under more favourable conditions, as to pay at all events, than the civilian. As far as I know, with the exceptions of a few scholarships for the purpose, most of this kind of work in civil life has to be done entirely at a man's own expense in time and money. That it will be otherwise in the army may be assumed from appointments already made. Young officers with exceptional qualifications for the purpose are likely to be struck off ordinary duty, at a reasonably early period in their career, to work in the various laboratories at home and abroad. Even as juniors they will be drawing, with their specialist pay, £375—£450 a year, at the same time qualifying for a pension. Should they find they have made a mistake in coming into the army they can go on the reserve, with a small annual honorarium, after three years' service. After nine they are entitled to a gratuity of £1000; and to a pension after twenty. Since I last wrote the scheme for specialist appointments in India has been published. It will be seen that a large number of these have been appropriated to preventive medicine. These appointments, to the number of 105, will be filled up as suitable candidates are available. Practically they will be divided between the R.A.M.C. and the I.M.S. The strength of the former corps in India is about 330. Here is the list:

Public Health, Parasitology, and Bacteriology	...	44, *i.e.*, 2 to each district laboratory.
Operative Surgery ...	...	10, „ 1 per division.
Fevers	...	10, „ 1 „
Dermatology and Syphilis	...	10, „ 1 „
Electricity and Skiagraphy	...	10, „ 1 „
Dental Surgery ...	...	10, „ 1 „
Ophthalmology ...	...	3, „ 1 per command.
Otology, Laryngology, and Rhinology ...	...	3, „ 1 „
Midwifery and Diseases of Women and Children	...	3, „ 1 „
Psychological Medicine	...	2 for all India.

The extra pay attaching to these posts is rather less than £50 a year. But of more importance than this is the increase of comfort, and lessening of expense, in being kept at one station, and that perhaps a more healthy one than might otherwise fall to your lot. Sanitary officers, and others, on tours of inspection would also see a great deal of the country at Government expense.

It is not unreasonable to assume that, when the various appointments in these branches are filled up, for the commands at home, it will be much in the above proportion. For sanitary officers were appointed some time ago, and at

* *St. Bart.'s Hosp. Journ.*, March, 1904.

* *St. Bart.'s Hosp. Journ.*, January, 1905.

some stations there are specialists in surgery, ophthalmology, and other subjects. To take an example. At Dublin and the Curragh there are two officers with special qualifications in surgery. One takes all the important work in his department in the northern half of Ireland, the other in the southern. They act much as consultants do in civil life, being sent for when their advice or operative skill is needed in emergencies, other cases being sent up to them. And so with specialists in other subjects in this and other commands. They are not moved from headquarters, and, I believe, at some stations are excused certain routine duties; but they do not necessarily hold their appointments for three years, as do the sanitary officers, and those in charge of hospitals for women and children.

At all large stations there is one of these latter. In addition to midwifery, gynæcological and other cases are taken in from the station and outlying district. The medical officer in charge has also the care of all the officers in the station and their families; in some cases of all the women and children in barracks as well. The holder of this appointment well earns his three years at home. He is kept on the run at all hours, and gets an idea of what his brother in civil life has to put up with. He, at all events, does not talk of chucking the Service for private practice, whatever his brother officers, otherwise employed, may say.

The first question a man naturally asks is—Can I live on my pay? The rates of pay will be found in the *Lancet* of May 23rd, 1903, or will be sent on official application. I have said that there are eventually to be about fifty specialist appointments, with extra pay, in India, and we may suppose that those at home and in the colonies will amount to at least another fifty. Then there is "charge pay" for the various hospitals varying from £45 to £180 per annum according to the number of beds. Perhaps there would be 100 of these at home and abroad. However, for the present I will omit these extra sources of income, and deal with the man who draws merely his ordinary pay and allowances. He starts with £325 a year; after three years service he gets £375, after seven £400, and £475 after ten. When promoted major at twelve years, or earlier if accelerated, he draws £585; about £700 (or so) when lieut.-colonel, and so on. In India in the lower ranks the pay is much the same, though it goes further; in the higher ones it is more. Of course the personal equation comes in as much in military life as in civil. One man will spend fifty or sixty rupees a month in keeping a couple of polo ponies or getting a little shooting; whilst another has not this sum to spare, owing to his unnecessary additions to his mess or club bill. Speaking generally, a bachelor should be able to live quite comfortably on his pay and take his share in whatever is going on. I speak from experience, as I have done so when my pay was very much less than is that of a junior now.

I have asked married men from various parts of India as to their expenses. They all agree that Rs. 500—600 a month (say £400—500 a year) is the absolute minimum that a couple, with no children, can start on with any comfort, and that this means rigid economy. It is true that for this you get much better value in the way of houses, servants, and horses than at home. But it must be remembered that India is the land of emergencies as well as of regrets. To meet these you must have a reserve fund, as the life of wife or child may depend on change to the hills or home.

I will bid good-bye to money matters by saying that perhaps I have not laid sufficient stress on the fact that after twenty years' service you have earned a pension of £1 a day.

To turn to less material details. If the honours and decorations to be won in the Service are regarded as in some degree a set-off to the greater pecuniary possibilities of civil life, I may be excused for mentioning some of them. Honorary physicians and surgeons to the King are appointed from past and present officers of the Royal Army Medical Corps. At present eight surgeon-generals are Knights Commanders of the Bath, and three of St. Michael and St. George. Of these Orders, as well as of the Distinguished Service Order and others, there are many Companions on the active and retired lists of the Corps. Lastly, of the sixty-six Victoria Crosses now held by officers of all branches of the British Army (irrespective of the Indian Army and the Colonial Forces, the medical officers of which have won their share also) thirteen belong to those of the Medical Service.

In conclusion, I think the best advice to offer a man wishing to enter the army is that he should pass the entrance examination at the earliest possible opportunity, and that he should make every effort to obtain a house appointment. It is true that promotion nowadays is by selection in the higher ranks, and that in the lower ones acceleration of it is given for professional merit. But it is rash to assume that there are not as many good men in the batch above you as in your own, in which case they are as likely as you to get special promotion, and so to keep ahead of you. A batch usually means thirty places on the list, a serious matter later on. So, if you mean to go in, do so at the first chance. Remember that a year spent in a house appointment after passing the entrance examination counts as service towards promotion and pension, and that, needless to say, the experience so gained cannot be acquired in any other way.

X. Y. Z.

The Special Departments.

WE propose to publish from time to time in the JOURNAL a short account of each of the special departments of the Hospital in turn, with a summary of a few of the cases in attendance. Our object in doing so is not so much to instruct, because that is impossible in the small space at our disposal, but rather to call attention to the great amount

of important practical work that is carried out in these departments, and also to diminish, if possible, the great waste of clinical material which occurs almost daily at the Hospital, by attracting more general interest in these departments. There is a tendency on the part of students to neglect the special departments altogether, or to rush through the work as quickly as possible, as if it was a necessary evil to be brushed aside. This mistake is only discovered afterwards, and it may be at the cost of many patients.

This month we take the Aural Department.

THE AURAL DEPARTMENT.

At a Special General Court of Governors, held in November, 1869, at which the Prince of Wales was present, it was resolved to establish certain Special Departments in connection with the Hospital, and shortly after this date Mr. Thomas Smith (now Sir Thomas) was placed in charge of an Aural Department. He was succeeded in 1873 by Mr. Langton, who resigned the appointment when he was elected full surgeon to the Hospital. In 1882 it was decided, upon recommendation of the Medical Council, to appoint an "aural surgeon" to take sole charge of the department, and in that year Mr. Cumberbatch was appointed, and has remained at the head of the Department ever since.

As at present circumstanced the Aural Department is a good example of work done under difficulties. How great the difficulties are only those who suffer under them can have any adequate idea. The floor space is totally inadequate: it could be made to accommodate three men and their patients if properly provided with lights, sinks, and tables. It has to find room for seven workers and often as many as ten patients, and the resultant loss of time and wear of temper can be imagined. Visitors are welcomed with a chastened joy, for the pressure is so great that it is almost impossible to show them anything. Hearing tests are handicapped by the re-echoing din of the surgery; babies are screaming in the hollow distance; through the open doors comes the crash and rattle of traffic over the Smithfield setts; in the male "cross-box" a house surgeon is making urgent efforts to pass a silver catheter through a stricture to a running accompaniment of groans and interjections from the patient.

Nearly twelve hundred aural cards are issued each year, and, as the majority of the patients attend at least a couple of months, the volume of work to be got through is large. Yet, with all the disadvantages of circumstance, there is hardly any special department which will more repay the man who dresses in it and makes the most of his chances. In every general practice a considerable number of aural cases occur. To have some clear idea of the proper way to treat them makes all the difference between a miserable and a gratifying result. To know when an ear is causing grave danger may often save not merely the doctor's reputation, but the patient's life. The dresser in the department learns to see and to know what he sees, and when he has got to that he has already gone far. After this the diagnosis is relatively easy, and he has plentiful chances of making it for himself and finding out how far fuller experience confirms his ideas. In the surgery he may see such minor operative procedures as incision of the membrane, curettings, removal of polypi, ossiculectomy. If his patience will allow him, he may wait and gain valuable insight into the technique of the major operations. If he becomes a dresser for in-patients he has the further advantage of helping in these operations and witnessing and carrying out the subsequent dressings. The variety and interest of major aural surgery has been well exemplified in the Hospital recently. Within ten days there were operated on by the Department three cases of acute mastoiditis in children; of these two were complicated by other illness but are doing well, the third died unrelieved, with a diagnosis open between septicæmia and diffuse purulent meningitis, as no autopsy could be obtained; one case of chronic otorrhœa with large cholesteatoma and erosion of bone; another where a smaller cholesteatoma of the attic kept up the suppuration; another with perisinous abscess and a sloughing lateral sinus. This last has been an eventful case.

The patient, a boy of twelve, had been ill for three weeks. Details of the nature of the illness were vague, but there was obviously suppuration in the right mastoid, with doubtful symptoms of a brain abscess. At the primary operation the sinus was found to be sloughing and full of pus. The cerebellum was explored with a negative result. Later, pyæmic symptoms appearing, the right jugular was tied, and an effort made to get beyond the clot in the sinus. This had, however, extended beyond the torcular, and the left jugular was tied. After more than a week of steady improvement the boy developed double optic neuritis, with intense headache and vomiting. There were no localising symptoms of any sort, and both cerebellum and temporo-sphenoidal lobe were fruitlessly explored on both sides. Some days later he died. Post-mortem the thrombosis had spread along the superior longitudinal sinus, and it was probably the œdema due to this that simulated abscess in the later stages. In addition infection had tracked from the sinuses along the entering veins, and there was universal purulent meningitis, yielding streptococci in pure culture.

Already those who work in the Medical School are familiar with the sounds that attend the commencement of the building of the new heaven and new earth for the Out-patient and Special Departments. Somewhere in the more upward and heavenly regions of the block the new Aural Department will come into being. There, amid light and quiet and clean surroundings, with room to move in, the department will come into its own in the way of teaching opportunities. Visitors will not be looked askance at; beds, it is to be hoped, will be more in proportion to the urgent needs of the department; theatres will not have to be waited for wearily. Not one, but all the special

departments, suffer now from similar causes, and in the expansion and improvement of our special departments, we believe that the Hospital as a whole will gain much both in efficiency and reputation.

Round the Fountain.

If any of our readers are looking for work or are ambitious to make a fortune we commend the following advertisements to their notice :

I ask nothing for $3000 unopposed country practice, in an ideal climate and community, established eighteen years. Buy my office or house of four rooms, drug stock, instruments, fine driving team, furniture of office at a low price, $1700 cash or will wait for $500. Doctor! come to the land of sunshine and big red apples, where you will be glad you are alive. Reason for selling given, am not leaving. R. A. C., M.D., Mesa, Colo.

CANCER.—I teach physicians (by mail) my treatment for permanent cure of cancer by medicine. Has stood the test of thirty-five years' practice. References to permanent cures; best paying speciality; regular graduate; national reputation. Address G. E. J., M.D., 85, Bayard Street, New Brunswick, N.J.

Doctor, I give instruction in my specialty. It will take a month to learn, and will cost you $500. It will bring you in a certain income of $15,000 a year. Write at once J. B. S., Mass., U.S.A.

The Past and Present Match.

NO finer afternoon could possibly have been chosen for the annual Past and Present matches than Thursday, June 22nd, and the Students' Union Council are to be congratulated on having arranged this fixture for a later week of June than in former years. The sun shone brightly throughout the day, and the ground at Winchmore Hill looked its very best. Even the pavilion flag tried to look gay.

Our visitors turned up in very fair numbers, and we were glad to see amongst them so many sisters and nurses. Several members of the Senior Staff were there—one of them indeed was playing in the cricket match—while the consulting staff was represented by Sir William Church.

The refreshments were excellent, especially the strawberries and cream and the ices; and the band was an improvement upon last year's bevy of stalwart constables, who, if we remember rightly, made up in volume what they lacked in *timbre*. The absence of the 1st Tennis VI, on account of a Cup-tie Match elsewhere, rather lessened the interest in the lawn tennis matches; but the cricket match was well worth watching; and even if there had merely been a coker-nut shy in the middle of the ground, we venture to think that the majority of our visitors would have been well content to remain in their hammock chairs and revel in the delights of a summer day in the country.

At one period of the afternoon there were so many motor cars drawn up within the precincts of the pavilion that a stranger on entering our gates might almost have imagined that a Hospital Gordon-Bennett Race was about to be run.

The feature of the Cricket Match was the excellent "century" by Parkinson for the Present XI. He was well supported by Gaskell, who was not content with scoring 68, but also took 4 wickets; and the Present finished off with considerably the better of the draw. For the Past XI Messrs. Heasman and Burroughes made a good stand for the first wicket, and treated the bowling with comparative indifference, while Anderson also played well for his 41; but those who followed lost their wickets in attempting to force the game. For scores see p. 154.

The Clubs.

CRICKET CLUB.

CUP TIE—FIRST ROUND.

ST. BART.'S *v.* CHARING CROSS HOSPITAL.

We met Charing Cross at Winchmore Hill, on Thursday, June 8th, and amply revenged last year's defeat by 1 run. De Verteuil (52) played a very fine innings at a critical stage of the game, in which he was backed up well by Noon (30) and Smith (25). Page proved irresistible with the ball, taking 7 for 28.

SCORES.

ST. BART.'S.		CHARING CROSS.	
P. R. Parkinson, b Williams	14	D. P. Williams, c Bowen, b Page	29
J. W. Bean, c Blythman, b Beaman	7	W. D. Keyworth, c With, b Page	9
G. Viner, b Beaman	1	E. H. Hugo, c Parkinson, b Page	4
J. F. Gaskell, b Williams	11	H. F. Hugo, b Page	0
J. Postlethwaite, b Beaman	0	E. D. Davies, b Page	0
P. A. With, b Williams	6	W. A. Beaman, b Parkinson	10
J. M. Smith, b Blythman	25	A. E. Blythman, c Parkinson, b Page	3
E. de Verteuil, c Davis, b Beaman	52	L. E. M. Smith, b Parkinson	1
C. Noon, not out	30	G. B. Lucas, l-b-w, b Page	3
G. F. Page, c Williams, b Blythman	12	E. S. Calthrop, c and b Parkinson	5
G. Bowen, c Hugo, b Beaman	2	W. W. D. Chilcott, not out	0
Extras	5	Extras	5
Total	165	Total	69

BOWLING ANALYSIS.

	Overs.	Maidens.	Runs.	Wickets.
Page	17	5	28	7
Parkinson	16·4	4	36	3

CUP TIE—SEMI-FINAL.

ST. BART.'S *v.* ST. THOMAS'S.

Played at Honor Oak on June 20th, and won easily by St. Bart.'s, for whom Parkinson played well for 41. Thanks to fine bowling by Page and Parkinson St. Thomas's collapsed badly.

SCORES.

ST. THOMAS'S.		ST. BART.'S.	
G. R. Footner, b Page	6	P. R. Parkinson, c Neild, b S.-Smith	41
F. N. Neild, c Page, b Parkinson	2	J. W. Bean, run out	27
W. Weir, b Page	1	J. M. Smith, b Hoare	29
F. H. Holl, b Parkinson	5	J. F. Gaskell, c Neild, b S.-Smith	0
E. A. Seymour, b Page	5	G. Viner, c Hoare, b S.-Smith	1
N. S. Hoare, b Page	3	J. Postlethwaite, c Weir, b Hoare	2
T. G. Starkey-Smith, b Page	0	E. de Verteuil, c Hoare, b S.-Smith	13
F. S. Hewitt, not out	11	P. A. With, c Hewitt, b Hoare	6
R. L. Barwick, b Parkinson	1	C. Noon, c Hewitt, b S.-Smith	0
B. I. Parsons Smith, b Page	0	G. Bowen, not out	8
H. A. Unwin, b Page	0	G. F. Page, c Neild, b S.-Smith	7
Extras	10	Extras	8
Total	44	Total	142

BOWLING ANALYSIS.

	Overs.	Maidens.	Runs.	Wickets.
Page	13·4	4	21	7
Parkinson	13	6	13	3

PAST *v.* PRESENT.

PRESENT.		PAST.	
P. R. Parkinson, c Heasman, b Adam	103	W. G. Heasman, c With, b Postlethwaite	38
J. W. Bean, b Fegan	4	H. N. Burroughes, c Gaskell, b Parkinson	42
G. F. Page, b Fegan	0	R. A. Fegan, run out	0
J. F. Gaskell, c Turner, b Heasman	68	C. A. Anderson, b Gaskell	41
E. de Verteuil, not out	18	H. E. Scoones, c Noon, b Gaskell	15
J. M. Smith, not out	15	C. H. Turner, c Parkinson, b Gaskell	17
P. A. With, J. Postlethwaite, G. Viner, G. Bowen, L. L. Phillips, C. Noon,	did not bat.	J. W. Nunn, not out	3
		H. E. G. Boyle, b Gaskell	3
		C. G. Watson, L. B. Rawling, C. H. Fernie, G. H. Adam,	did not bat.
Extras	32	Extras	7
Total (4 wkts*)	240	Total (7 wkts)	166

* Innings declared closed.

The scores of the following matches are held over:
June 3rd.—*v.* M.C.C., lost by 151 runs.
,, 17th.—*v.* R.I.E.C., lost by 19 runs.
,, 25th.—*v.* Mayfield, won by 156 runs.

2ND XI.

We beat St. Thomas's 2nd XI on Thursday, June 15th, and thus qualified for the final of the Junior Cup Tie.

ATHLETIC CLUB.

The sports were held on Wednesday, June 14th, at Winchmore Hill. The attendance was much larger than last year, and we must congratulate the Committee and all those concerned on the appearance of the ground and the excellent way in which everything was arranged. The marquee in which refreshments were served made the field especially festive, while the weather was all that could be desired.

No records were broken, and the performances were for the most part only moderate, but some of the finishes were very exciting. This speaks well for the handicapping as a whole, though in some instances—notably the 120 Yards—it was very wild.

The heats for the 100 Yards Level opened the proceedings, and were succeeded by Putting the Weight, which P. Gosse (rec. 14 ft.) won with 39 ft. 10 in.; L. F. K. Way was second, and H. C. Waldo third. F. P. Young (scratch man) put 36 ft. 8¾ in.

The Long Jump was won by H. Spitz (rec. 1 ft. 6 in.) at 19 ft. 4¾ in. J. R. Lloyd (rec. 1 ft.) was second. L. F. K. Way (scratch man) jumped 18 ft. 11¼ in.

F. C. Trapnell ran the 440 Yards Level in 55⅕ sec., which, considering the grass track, was distinctly good.

The energetic Hon. Sec., L. F. K. Way, was again in evidence in the 120 Yards Hurdles, which he won in 17⅘ sec. A. H. Hogarth was a close second.

The next event after the heats for the 120 Yards Handicap was Throwing the Hammer (Handicap), which P. Gosse, the old veteran, won, thanks to his handicap; Way being second, and R. Jamieson third.

The Half Mile Handicap was won from scratch by W. H. May in 2 min. 10⅕ sec. He is a new and valuable addition to the Hospital Athletic Club since last year, and has already distinguished himself during the cross country season. E. V. Oulton was a close second; the latter also won the 220 Yards (Fresher's Race) in 26⅕ sec., thus securing Dr. Griffiths' Challenge Cup offered for that event. M. W. B. Oliver was second.

E. R. Evans won the Challenge Cup for the 100 Yards Level in 10⅘ sec. F. C. Trapnell was second.

B. Hudson ran well in the Junior Staff Race—time 11 sec.—beating Burfield by a yard and a half.

The High Jump Handicap was won by F. J. Gordon (rec. 4 in.) with 5 ft. 1¾ in. Rendall was second, and L. F. K. Way third; the last-named did the best jump of the afternoon, clearing 4 ft. 11½ in.

R. Jamison won the 120 Yards Handicap, and P. Gosse was second.

About a dozen men started for the mile. Dr. Morley Fletcher offered a very fine silver cup for this race, for which there was keen competition. G. H. Almond (who received the limit of 150 yards handicap) ran with grim determination, and, leading throughout, just managed to hold his own against W. H. May, who started 60 yards from scratch. The finish was an exciting one, May coming along at a great pace for the last 250 yards. Time 4 min. 47⅕ sec. A. L. Candler, scratch man, did not show his usual form.

The Relay Race—one mile—was again a great success, being won by the Association Team, represented by C. B. D. Butcher, E. R. Evans, F. J. Gordon, and A. H. Hogarth in 3 min. 57⅘ sec.

The Tug-of-War was won by the second year men, thanks to the enthusiasm of R. Von Braun.

After this an adjournment was made to the pavilion, where the prizes were distributed by Mrs. Morley Fletcher, to whom we owe our best thanks, knowing, as we do, the kindly interest which she has shown for many years in the Hospital Athletic Club.

The proceedings terminated with a hearty vote of thanks to Dr. and Mrs. Morley Fletcher, and, in conclusion, we must thank all the members of the Staff and other old Bartholomew's men who were kind enough to officiate during the afternoon.

The United Hospital Sports were held on Wednesday, June 21st, at Stamford Bridge, when, unfortunately, the London Hospital team proved too strong for us for the second year in succession. We were unlucky in not having the services of W. H. Orton for the sprint races, and we take this opportunity of wishing him a speedy recovery from his indisposition. We won three events, namely Putting the Shot by F. P. Young, 37 ft. 11½ in., the Hurdles by L. F. K. Way, who was in grand form, and the 220 Yards Level by E. R. Evans after an excellent race. We also secured three second places in the Long Jump, the Mile, and Three Miles; but, for the rest, our sanguine expectations were not fulfilled. No one will deny that the London Hospital won on their merits, but we had very little luck on our side, and none of the other Hospitals helped us to reduce the lead of the London. The track was in wretched condition, and most of the events were contested under very trying circumstances, for instance, there were two curves in the 220 Yards Level Race, and the competitors in the Quarter Mile had to begin by running up a bank.

The following were our representatives:
100 Yards.—E. R. Evans and F. C. Trapnell.
Putting the Weight.—F. P. Young.
Long Jump.—F. C. Searle and L. F. K. Way.
440 Yards.—F. C. Trapnell and F. J. Gordon.
Hurdles.—L. F. K. Way.
Throwing the Hammer.—F. P. Young.
Half Mile.—W. H. May and B. A. Keats.

220 Yards.—E. R. Evans and F. J. Gordon.
High Jump.—S. Rendall.
One Mile.—A. L. Candler, W. H. May, and B. A. Keats.
Three Miles.—A. L. Candler, W. B. Grandage, and A. R. Snowden.

We consoled ourselves somewhat with the fact that our team for the Tug-of-War, ably captained by R. Von Braun, proved victorious, defeating Guy's and Charing Cross with great ease.

SWIMMING CLUB.

ST. BART.'S *v.* EALING.

Arranged for the 9th June this match had to be scratched, and this notwithstanding the fact that the team had been put up on the notice board for *four days*. On the actual day of the match three men scratched, and despite the energy of the Secretary, since it was Whitsuntide no substitutes could be obtained on such short notice. All the members of the Club now have fixture cards, and such a proceeding is inexcusable, to say nothing of giving the Club a bad reputation. In future the selected members might give two days' notice of inability to play to either captain or secretary, or scratch *before* the day of the match.

On June 28th we met Guy's in the 1st round of the Inter-Hospital Water Polo competition, but we were defeated by 3 goals to 1. Our team was quite unrepresentative, chiefly owing to the slackness of certain members, who ought to have made a point of playing.

ST. BART.'S *v.* H.A.C.

This match, played at the Holborn Baths on June 19th, resulted in a win for the Hospital by 7—4. Each team turned up a man short, and the resulting game was somewhat of a scramble. The first goal was scored by S. Y. Stones shortly after the game began; then a good shot in the left-hand corner of our goal made matters even. Shortly after Trapnell shot a goal, and our opponents again equalised (2—2). Bart.'s then woke up, and Stones, Ryland, and Watkins all shot goals in rapid succession (5—2). After half-time White scored a goal for the Hospital, and shortly after Stones scored another (7—2). H.A.C. pulled themselves more together, and in the last two minutes added two goals, leaving us victorious by 7—4. As in all six-a-side games there was rather a lack of passing on both sides. Team:

H. V. Capon (goal); C. F. O. White, F. C. Trapnell (backs); J. G. Watkins (half-back); A. Ryland, S. Y. Stones (forwards).

LAWN TENNIS CLUB.

The Tennis Club has not been a great success this season, partly owing to the loss of the old members of the team, only two colours remaining, and no doubt also to the inferiority of the play. The loss of the captain, P. Black, for the greater part of the season, owing to indisposition, was keenly felt. There are three Freshmen to the team, but their play is not markedly conspicuous. Six matches have been played so far, registering three wins, namely, against St. Mary's twice and the R.I.E.C.; and three losses, namely, Christ's College, Cambridge, St. Andrews, and R.I.E.C. Three matches have been scratched owing to the rain, and two more have yet to be played. In the Inter-Hospital Cup Tie we were defeated by the London, mainly owing to their scoring all the singles save one, which P. Black succeeded in winning. The doubles were more even, but the fact that they won three games gave them the match. It is satisfactory to note that the courts at Winchmore Hill, which are in excellent condition, seem to have been much used this year.

An Appreciation from Davos.

EUSTACE TALBOT, OBIIT MAY 26TH, 1905.

TALBOT is gone, and we cannot yet realise the extent of our loss; so trusty a comrade, such a tower of strength he was to us—the strength that comes from difficulties faced and conquered. He had only been a few days resident after the six months' grind as junior H.P. when he had to give up his post and spend weary months in quest of health, an ignoble and too often demoralising pursuit. But he took it all bravely, set himself to getting well as he would carry through anything, work or play; never for a moment letting it spoil his career. He got the better of the dread bacillus—as he was sure to do, made up lost time, was on the high road to name and fame, when he was suddenly cut off.

The ways of Providence are indeed inscrutable. The strong and efficient are taken; the weaklings left. As to the whither? We all have our own working theories—happiest those of us who can think of our best friends in some sphere with more scope for their powers, freer, less restricted by physical weakness. But this at any rate is plain certainty, that Talbot's memory will remain with us as a constant inspiration to live down our own difficulties, to let no physical weakness of any sort small or great, stand in the way of our making the best of our own lives.

Peace be with thee, friend! We too will be steadfast.

E. C. M.

Reviews.

EXERCISES IN PRACTICAL PHYSIOLOGY: PART II. By AUGUSTUS D. WALLER and W. LEGGE SYMES. Pp. 79. (Longmans, Green, and Co. *2s. 6d.* net.)

This is an excellent little book which should be found useful for revision purposes by candidates for the university examinations.

Several chapters are extremely good, but the whole book is rather spoiled for any but advanced students by the frequent use of unexplained scientific terms such, for example, as midriasis, proptosis, and many others.

ELEMENTARY MICROSCOPY. A Handbook for Beginners. By F. SHILLINGTON SCALES, F.R.M.S. Price *3s.* net. (Baillière, Tindall & Cox.)

This little book will be found of much assistance to the medical student during his time of trouble when purchasing a microscope. Should he be possessed of wealth he will find how to invest some of it to the best advantage without being "had;" and if, on the other hand, his means are limited, he will learn how to get what will be most useful to him with the least outlay. Besides this there are excellent short chapters on the practical optics of the microscope and on its manipulation which will aid the student to get the best value out of the instrument whilst it is still his own.

Unfortunately we are compelled to hold over the reviews of several books.—ED.

WE present our readers with a radiograph of the not very common condition of supernumerary or cervical rib. In this instance the rib is plainly to be seen on both sides. On the right the small cross marks the junction of the bone with its costal cartilage, which appears to be attached to that of the first true rib.

Cervical ribs often give rise to paralytic symptoms in the upper extremity from their action in pressing upon the brachial plexus. The nerve roots most usually affected are the eighth cervical and first dorsal, and on this account an operation for the removal of the rib may be necessary.

R.A.M.C. Notes.

Gazette notifications:

Lt.-Col. W. J. Baker has been selected for increase of pay. Capt. E. M. Williams has been promoted to Major. Lieut. L. V. Thurston is confirmed in that rank.

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Capt. C. H. HOPKINS (Bombay) has been appointed specialist in specific fevers for the Western Command.

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Capt. R. F. ELLERY has been transferred from Allahabad to Landour.

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Lt.-Col. W. J. BEDFORD, C.M.G., is home on leave from Gibraltar; and Lieut. A. A. Meaden has six months' sick leave from India.

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Lieut. C. H. Turner has been transferred from Aldershot to Woolwich; Lieuts. C. D. M. Holbrooke and C. W. O'Brien from there to Netley, whilst Lieut. W. S. Nealor remains at that station.

Indian Medical Service.

Lieut. L. B. SCOTT is reported as having arrived in London on leave.

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Captain H. J. TWIGG is appointed to be Superintendent, Central Prison, Hyderabad, and on relief to act as Superintendent, Central Prison, Yeravda.

Examinations.

UNIVERSITY OF CAMBRIDGE.

1st M.B.: Part I.—H. J. Baldwin.
2nd M.B.—A. J. S. Fuller, T. S. Gibson, B. Haigh, G. W. Twigg.
3rd M.B.: Part I.—H. Beckton, H. J. D. Birkett, T. W. N. Dunn, J. F. Gaskell, H. J. Gauvain, H. E. Graham, H. Hardwick Smith, N. G. Horner, P. R. Parkinson.

Appointments.

E. C. HAYES, M.R.C.S., L.R.C.P., appointed Assistant Resident Medical Officer to the North-West London Hospital.

C. NEDWILL, M.B., B.C., appointed Government Inspector in the Sudan Medical Department.

A. S. PETRIE, M.R.C.S., L.R.C.P., appointed House Surgeon at the Victoria Hospital for Children.

J. E. PRATT, M.R.C.S., L.R.C.P., appointed Junior House Surgeon to the Coventry and Warwickshire Hospital.

C. H. ROBERTS, M.D., M.R.C.P., appointed an Examiner to the Central Midwives' Board.

J. A. WILLETT, M.B., M.R.C.P., appointed Registrar to the Samaritan Free Hospital.

H. WILLIAMSON, M.B., M.R.C.P., appointed an Examiner to the Central Midwives' Board.

R. A. YELD, M.D., appointed Hon. Secretary to the Hampstead Division of the Metropolitan Counties Branch of the British Medical Association.

New Addresses.

BEADLES, H. S., 61, London Road, Forest Hill, S.E.
BECK, E. A. A., Trinity Hall, Cambridge.
BROWN, DURWARD, Spring Grove, Springfield Avenue, Harrogate.
BROWNLOW, H. L., Shirley, St. Andrew's Road, Henley-on-Thames.
CROSS, W. FOSTER, 80, New Cavendish Street, W.
DAVENPORT-KNIGHT, A., 78, Ebury Street, S.W.
HAWKINS, E. J., 8, Market Terrace, Lee Bridge Road, E.
HEPBURN, M. L., 66, Wimpole Street, W.
HIGGINS, A. G., Newent, Gloucestershire.
MORGAN, C. C., 30, Campbell Road, Bow, E.
NICOLL, C. V., 30, Iverna Court, Kensington, W.
NUNN, J. H. F., "Brackendene," 286, Balham High Road, S.W.
PINKER, H. G., 6, Dalby Road, Cliftonville.
WILLIAMSON, J., The Limes, East Street, Epsom.
WINDER, M. G., R.A.M.C., Military Hospital, Potchefstroom, Transvaal.

Births.

HARTLEY.—On May 27th, at 39, The Terrace, Gravesend, the wife of J. Dawson Hartley, F.R.C.S.Eng., of a son.
HENDLEY.—On June 4th, at 6, Cleveland Road, West Ealing, W., the wife of Major A. G. Hendley, I.M.S., of a son.
MAXWELL.—May 27th, at Tainan, Formosa, the wife of Dr. J. L. Maxwell, of a daughter.
SCHOLBERG.—On June 12th, at Cardiff, the wife of H. A. Scholberg, Esq., M.B., of a son.

Marriages.

BEADLES—DEARLOVE.—On May 4th, at Elm Church, Cambs., by the Rev. M. R. Ruston, assisted by the Rev. A. Beadles and the Rev. Canon Stokes, Hugh Stanley Beadles, M.R.C.S.Eng., L.R.C.P.Lond., third son of Dr. Beadles, of Forest Hill, to Violet Mary, eldest daughter of the late Thomas D. Dearlove, Esq., of Oxburgh Hall, and of Mrs. Dearlove, of Coldham House, near Wisbech.

GARDNER—CHAPMAN.—On June 10th, at St. Saviours, Chelsea, by the Rev. Launcelot Chas. Walford, M.A., Vicar, William Thomas Gardner, M.B.Lond., of Bournemouth, to Adrea Gabrielle, youngest daughter of the late David Ward Chapman, of Spa, Belgium.

HARVEY—HARVEY.—On June 6th, at Stoke Damerel, Devonport, Frank Harvey, M.B., of Rotherham, son of Francis Harvey, of Penzance, to Charlotte Burdwood Harvey, daughter of Fleet Surgeon Christopher Harvey, R.N.

MACLAREN—DAVIDSON.—At St. Cuthbert's Church, Carlisle, on Wednesday, June 21st, 1905, by the Vicar, the Rev. H. P. M. Lapere, assisted by the Rev. W. B. Davis, Norman Maclaren, F.R.C.S., the eldest son of Roderick Maclaren, M.D., to Elizabeth Stead Davidson, the elder daughter of Mrs. Davidson, 12, Victoria Place, Carlisle.

NOTICE.

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